



Figure similar

Data sheet for SIMOTICS S-1FK2

Article No. : **1FK2102-1AG00-0MA0-Z**
A22+M00+R40

Client order no. :
Order no. :
Offer no. :
Remarks :

Item no. :
Consignment no. :
Project :

Basic data of geared motor	
Motor type	Permanent-magnet synchronous motor, Planetary gearbox, Natural cooling, Degree of protection IP64
Motor type	High Dynamic
Static torque at output $M_{2,0}$	10.80 Nm
Static current I_0	0.8 A
Maximum torque at output $M_{2,max}^{(6)}$	41.50 Nm
Maximum output speed $n_{2,max}$	200 rpm
Moment of inertia motor + gearbox (related to the input) J_1	0.102 kgcm ²
Mass m	1.69 kg
Lubrication	Standard

Rated data of geared motor	
SINAMICS S210, 1AC 230V	
Rated speed related to the gear output n_{2N}	75 rpm
Rated torque related to the gear output M_{2N}	9.00 Nm
Rated power P_N	0.071 kW

Basic data of gearbox	
Gearbox type and size	Planetary gearbox NRB060
Transmission ratio i	1 : 40 (Output to input)
Number of gear stages z	2
Output torque (fatigue strength) $M_{2N,G}^{(3)}$	40.0 Nm
Maximum permissible output torque (short-time, end of fatigue strength) $M_{2,max,G}$	64.0 Nm
Emergency off output moment (1000 cycles) $M_{2Em,Off}$	80.0 Nm
Torsional backlash related to the output φ_2	12 '
Torsional stiffness related to the output c_{T2}	2.8 Nm/'
Maximum static radial force $F_{R,max}$	700 N
Max. average radial force for 20000 h $F_{R,eq}^{(4)}$	400 N
Maximum static axial force $F_{A,max}$	800 N
Max. average axial force for 20000 h $F_{A,eq}^{(5)}$	500 N
Max. average breakdown torque M_K	14 Nm
Max. bending moment on the flange to the motor M_B	12 Nm
Efficiency η_G	0.94
Degree of protection gearbox	IP64
Gearbox shaft extension	Plain shaft

Basic motor data	
Maximum average torque (incl. derating due to mounted gearing) $M_{0,M}$	0.27 Nm
Maximum average continuous current (incl. derating due to mounted gearing) $I_{0,M}$	0.64 A
Maximum acceleration torque $M_{max,M}^{(3)}$	1.04 Nm
Maximum short-time permissible current $I_{max,M}$	2.95 A
Degree of protection motor	IP64
Connection type	OCC for S210
Connector size	M12
Encoder system	Encoder AM22DQC: Absolute encoder 22 bit + 12 bit multturn

³⁾The maximum acceleration torque $M_{max,M}$ x of transmission ratio i is greater than the output torque (fatigue strength) $M_{2N,G}$. Depending on the load conditions, a service life calculation may be necessary.

⁴⁾based on an output speed of 100 rpm and a force application point in the center of the shaft

⁵⁾based on an output speed of 100 rpm

⁶⁾Fatigue limit range - utilization only with service life calculation